COUNTRY RISK AND RISK PREMIUM FOR PORTFOLIO INVESTMENTS: AN EXAMINATION OF BRICS NATIONS

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Abstract

Country risk has become a key variable for investors to choose among global destinations. As the risk and return of destinations are different, investors have to be selective in the case of destinations to construct a global security portfolio. Determination of Expected Rate of Return (ERR) on investment reflecting the Country Risk Premium (CRP) is inevitable to proced with investment decision. BRICS nations are one of the largest economic groupings with more than 40 per cent of the world population, nearly 30 per cent of the total landmass and 19 per cent of world GDP. They are emerging as global investment destinations for parking funds in securities expecting globally higher returns. The present paper examined the country risk of BRICS nations in terms Annualized Relative Standard Deviation (ARSD) by benchmarking US Dow 30 Index and South Africa's FTSE Index and found that, in terms of country risk, South Africa is the most favourable nation for equity investment with lower ARSD and Russia is the most unfavourable nation with higher ARSD. Further, the computed CRP of the nations which facilitates the computation of ERR on investment in each country revealed that it is volatile for all the nations during the six year period of analysis. Noticeably, South Africa stands with exceptionally lower and negative Country Risk Premium indicating better performance variation in return than the benchmark US's investment returns.

Key words: *Country Risk, Country Risk Premium, BRICS, Foreign Portfolio Investment*

I. Introduction

The increased integration of economies through trade, financial and technology markets has created a new world environment with full of opportunities but fraught with uncertainty and spill-over risks (Duhalde, 2003) (Terrier, 2001) (Kumar, Susheel, & Bindu, 2012). This is particularly true in the case emerging economies. The last three decades have been disrupted by a number of financial crises in emerging market economies ultimately resulting in erosion of net worth of investments. Despite the conventional view that emerging markets constitute highly volatile, fiscally unsound, politically fragile economies, the fact is that emerging market debt often outperformed other investments in developed markets (Duhalde, 2003). A global investor looking for diversified global portfolio looks for higher return markets, emerging or otherwise. Here is the relevance and importance of country risk (Damodaran, Country Risk and Company Exposure: Theory and Practice, 2003) (Damodaran, Equity Risk Premiums (ERP): Determinants, Estimation and Implications - A post-crisis Update , 2009). Investing in an emerging country, such as some countries in Latin America, Southeast Europe and Asia is considered riskier than investing in big and developed markets like the USA, Japan and Western Europe countries (Naumoski, 2012). It is generally accepted that risk is relevant in investing and that riskier investment should provide higher returns than low risk investments. The required return on investment is the sum of the risk-free rate and the risk premium (Godfrey & Espinosa, 1996) (Damodaran, Equity Risk Premiums (ERP): Determinants, Estimation and Implications - A post-crisis Update , 2009). In short, investing in the portfolios in USA and in India or in other emerging markets are not of the same risk as country risk can differ.

II. Country Risk and Risk Premium

The concept 'country risk' is abstract as it has been construed to mean performance variation in returns from investment in a country on account of explainable factors having different dimensions

and impacts. The definition proposed by Meldrum (2000) perfectly reflects these characteristics: "All business transactions involve some degree of risk. When business transactions occur across international borders, they carry additional risks not present in domestic transactions. These additional risks, called country risks, typically include risks arising from a variety of national differences in economic structures, policies, socio-political institutions, geography and currencies. The country risk analysis (CRA) attempts to identify the potential for these risks to decrease the expected return of a cross-border investment." It has been widely agreed that, in the required rate of return, the country risk must be rewarded with a country risk premium over an equivalent investment in a less risky country. The central debate in the academic literature during the last decade was how to measure risk, and how to convert the risk measure in an expected return on investment to compensate for the risk assumed. (Naumoski, 2012) (Meldrum, 2000) (Godfrey & Espinosa, 1996). Then, academics have ended up with a number of models, with varied dimensions, to cope up with the measurement of country risk and risk premium. The different works of Damodaran (2003, 2009 & 2011) are quite a comprehensive guide in the measurement of country risk and the related risk premium.

III. Stock Market and BRICS Nations

Brazil, Russia, India, and China, before being grouped as the BRIC countries by Goldman Sachs Economist Jim O'Neill, were for a long time on the periphery of the global economy. These countries along with South Africa are now almost looked as a unit in the international financial markets. In principle, the five main stock exchanges of the BRICS nations can be categorized according to certain criteria, but in general, like the countries themselves, their financial markets have little in common (Genkel, 2012). China and India, as Asian giants, outweigh the others in terms of importance, population and the size of their economies. Russia and Brazil are considered secondary members and their function is that of suppliers of raw materials to countries like India and China, which bodes well for the long-term growth prospects of the Asian powers. However, as a result of the liberal economic reforms over the past 20 years, Brazil has made a huge socio-economic leap forward and this has brought success even to the stock market. The modern securities market of China is not considered to be internationalised. It is widely believed that China has no particular need to develop its stock market. The salient feature of its economic model is to maintain the state's leading role in all areas of economic life, which incidentally is also the case in Russia. However, the growth of the stock market especially during 2000s in China has caused a great public craze for investment. India's market is the opposite of China's, boasting as it does a high share of foreign companies. Despite the fact that the Indian market is more than 150 years old, the population of the country does not heavily invest in stocks with only 1.2 percent of savings directly being invested in stocks and bonds. India, with a population of over one billion people and a fairly high level of household savings has a permanent need for capital inflows from abroad. Foreign institutional investors hold more than 10 per cent of the Indian stock-market assets. In short, the BRICS countries are more divergent than alike, we believe that investors, instead of considering them as a group with equal opportunities, will make preference based on parameters (Genkel, 2012).

IV. Objectives and Methodology

The study aims to examine the country risk and risk premium for portfolio investment in BRICS nations for a period of six years from 2008 based on the methodology given by Damodaran (2003, 2009 & 2011). The computation is done following four steps. Step (1) computes the monthly yield of the selected security markets of BRICS. The stock indices viz., Bovespa, MICEX, BSE Sensex, Shanghai Composite and FTSE respectively for Brazil, Russia, India, China and South Africa are used for the computation of monthly yield. Step (2) measures the Country Risk for Equity Investment by computing Annualised Relative Standard Deviation (ARSD) of BRICS nations by benchmarking Dow 30 (US) as an external market and FTSE (South Africa), a best stock market performer among BRICS nations (Petrovic & Stankovic, 2009; Damodaran, 2003). Step (3) computes the Equity Risk Premium (ERP) of BRICS nations by multiplying the Equity Risk Premium of US with the ARSD of the

respective nations. Step (4) finally computes the Country Risk Premium of BRICS nations by multiplying the Equity Risk Premium of BRICS nations with the Risk Premium of US. The computed Country Risk Premium of the BRICS facilitates the computation of Expected Rate of Return (ERR) on investment form these nations. The data required for the computation are sought from the websites http://www.investing.com/indices/world-indices and http://pages.stern.nyu.edu/~adamodar/. The measurement has been illustrated below.

Step 2: $\boldsymbol{ARSDx = \sigma x/\sigma us\ X\ 100}$ (Damodaran, 2003) …….. (1)

ARSDx = Annualized Relative Standard Deviation of Country x

σx =Annualized Standard Deviation of Yield of Country x

σus =Annualized Standard Deviation of Yield of US

Higher the ARSD, higher is the country risk and vice versa.

Step 3: $\boldsymbol{ERPx = RPus\ X\ ASRDx}$ (Damodaran, 2011) ……..(2)

ERPx =Equity Risk Premium of Country x

RPus =Risk Premium of US

ARSDx = Annualized Relative Standard Deviation of Country x

Step 4: $\boldsymbol{CRPx = ERPx - RPus}$ (Damodaran, 2011) ……..(3)

CRPx =Country Risk Premium of Country x

ERPx =Equity Risk Premium of Country x

RPus =Risk Premium of US

V. Results

The Annualised Relative Statndard Deviations (ARSDs) of the BRICS nations which reflect the respective country risk of the nations in relation to the US benchmark (Dow 30 index) and South Africa benchmark (FTSE index) are given in Table 1 and 2 respectively. South Africa has the least country risk among the BRICS nations in all the years except in 2009 (ARSD 99.20 against 89.96 of Brazil in 2009). Altogether, for the period, South Africa is found to be less risky destination for investment than US (ARSD 91.67 against 100 of US). This result is supported by the S&P BCRA[1] rating of countries which placed South Africa in Group-5 in the matter of credit worthiness (Standard & Poor's Rating Services, 2012). Moreover, the World Bank Group's report, Doing Business 2010, ranked South Africa 39 out of 185 economies, in terms of ease of doing business and ranked 1 in terms of ease of getting credit (The World Bank, 2013). Being the seventh wealthiest economy in the world, Brazil shows the 2nd lowest country risk among the BRICS nations (ARSD 141.92; Table 1). It indicates that Brazil's strong domestic market was less vulnerable to external crisis and Brazilians are benefiting from stable economic growth. Relatively low inflation rates and improvements in social wellbeing are the added reason to this effect (The World Bank, 2013). India is placed in the middle position among the BRICS nations (ARSD 162.98). Russia is the least prefered destination for investment among the BRICS nations as its country risk in terms of ARSD is 187.63 per cent for the period (Table 1).

[1] *Standard &Poor's Banking Industry Country Risk Assessment* (S&P BICRA) - The strengths and weaknesses of an economy and banking industry are critical factors that underpin the creditworthiness of a country's financial institutions. A BICRA is scored on a scale from '1' to '10', ranging from the lowest-risk (group '1') to the highest-risk (group '10')

Table 1. Annualized Relative Standard Deviation (ARSD) – 2008 to 2013

Year	ARSD (Benchmark Dow 30 of US)				
	Brazil	Russia	India	China	South Africa
2008	189.24	246.42**	183.19	214.46	99.10*
2009	89.96*	155.44	161.56**	156.37	99.20
2010	112.65	108.85	99.62	149.97**	88.72*
2011	115.15	144.95**	139.26	82.55	74.23*
2012	198.56	200.55**	192.07	178.11	59.28*
2013	181.69	146.15	140.57	271.28**	108.16*
2008-13	**141.92**	**187.63****	**162.98**	**179.76**	**91.67***

Note: * Lowest of the year ** Highest of the year

Table 2. Annualized Relative Standard Deviation (ARSD) – 2008 to 2013

Year	ASRD (Benchmark FTSE of South Africa)				
	Brazil	Russia	India	China	South Africa
2008	190.95	248.65	184.85	216.40**	100
2009	90.69*	156.70	162.87**	157.64	100
2010	126.98	122.70	112.29*	169.04**	100
2011	155.13	195.27**	187.60	111.21*	100
2012	334.96	338.31**	324.00	300.46	100
2013	167.98	135.12	129.96	250.80**	100
2008-13	**154.83**	**204.69****	**177.80**	**196.10**	**100***

Note: * Lowest of the year ** Highest of the year

The Country Risk Premium (CRP) which is a vital variable for the computation of ERR on investment are shown in Tables 3 and 4. The premium is found to be volatile for all the nations during the six year period of analysis. Noticeably, South Africa stands with exceptionally negative Country Risk Premium indicating better performance variation in return than the benchmark US's investment returns. When the CRP increases the ERR as a Cut-off rate for investment decions also increases.

Table 3. Country Risk Premium for BRICS Nations (Benchmark US Dow 30)

Country	Year	RSD	Risk Premium of US (%)	Equity Risk Premium (%)	Country Risk Premium (%)
Brazil	2008	1.89	5.00	9.46	4.46
	2009	0.90	4.50	4.05	-0.45
	2010	1.13	5.00	5.63	0.63
	2011	1.15	6.00	6.91	0.91

	2012	1.99	5.80	11.52	5.72
	2013	1.82	5.00	9.08	4.08
Russia	2008	2.46	5.00	12.32	7.32
	2009	1.55	4.50	6.99	2.49
	2010	1.09	5.00	5.44	0.44
	2011	1.45	6.00	8.70	2.70
	2012	2.01	5.80	11.63	5.83
	2013	1.46	5.00	7.31	2.31
India	2008	1.83	5.00	9.16	4.16
	2009	1.62	4.50	7.27	2.77
	2010	1.00	5.00	4.98	-0.02
	2011	1.39	6.00	8.36	2.36
	2012	1.92	5.80	11.14	5.34
	2013	1.41	5.00	7.03	2.03
China	2008	2.14	5.00	10.72	5.72
	2009	1.56	4.50	7.04	2.54
	2010	1.50	5.00	7.50	2.50
	2011	0.83	6.00	4.95	-1.05
	2012	1.78	5.80	10.33	4.53
	2013	2.71	5.00	13.56	8.56
South Africa	2008	0.99	5.00	4.96	-0.04
	2009	0.99	4.50	4.46	-0.04
	2010	0.89	5.00	4.44	-0.56
	2011	0.74	6.00	4.45	-1.55
	2012	0.59	5.80	3.44	-2.36
	2013	1.08	5.00	5.41	0.41

Source: http://pages.stern.nyu.edu/~adamodar/

Table 4. Country Risk Premium for BRICS Nations (Benchmark FTSE of South Africa)

Country	Year	RSD	Risk Premium of South Africa (%)	Equity Risk Premium (%)	Country Risk Premium (%)
Brazil	2008	1.91	7.40	14.13	6.73
	2009	0.91	6.30	5.71	-0.59
	2010	1.27	5.38	6.83	1.45
	2011	1.55	7.73	11.99	4.26
	2012	3.35	8.05	26.96	18.91

	2013	1.68	7.40	12.43	5.03
Russia	2008	2.49	7.40	18.40	11.00
	2009	1.57	6.30	9.87	3.57
	2010	1.23	5.38	6.60	1.22
	2011	1.95	7.73	15.09	7.36
	2012	3.38	8.05	27.23	19.18
	2013	1.35	7.40	10.00	2.60
India	2008	1.85	7.40	13.68	6.28
	2009	1.63	6.30	10.26	3.96
	2010	1.12	5.38	6.04	0.66
	2011	1.88	7.73	14.50	6.77
	2012	3.24	8.05	26.08	18.03
	2013	1.30	7.40	9.62	2.22
China	2008	2.16	7.40	16.01	8.61
	2009	1.58	6.30	9.93	3.63
	2010	1.69	5.38	9.09	3.71
	2011	1.11	7.73	8.60	0.87
	2012	3.00	8.05	24.19	16.14
	2013	2.51	7.40	18.56	11.16
South Africa	2008	1.00	7.40	7.40	0.00
	2009	1.00	6.30	6.30	0.00
	2010	1.00	5.38	5.38	0.00
	2011	1.00	7.73	7.73	0.00
	2012	1.00	8.05	8.05	0.00
	2013	1.00	7.40	7.40	0.00

Source: http://pages.stern.nyu.edu/~adamodar/

VI. Conclusion

Normally, an investor planning for a global portfolio has to take into account the country risk and the country risk premium while computing the expected rate of return from his investment. While emerging nations offer higher returns than the developed nations, the volatility in the emerging markets constraints investment decisions devoid country risk premium. However, it is also interesting to note that the increasing correlation among world markets reduced the scope for global diversification of portfolios. Here, it is confirmed that investment in BRICS nations assumes different risk levels for a global investor. Therefore, the ERR reflecting CRP of each of the nation is a key variable for the construction of a global portfolio. As the ERR is sum of Risk Free Rate and CRP, every increase in CRP results in increase in the Cut-off rate for accepting portfolios.

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